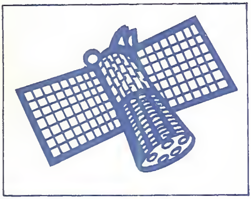
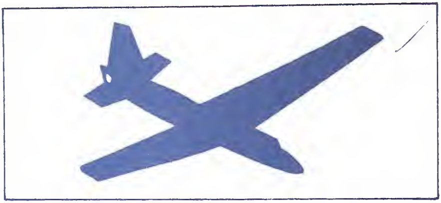
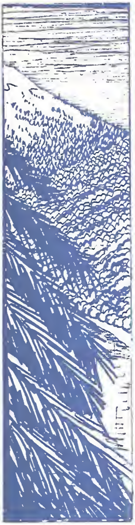
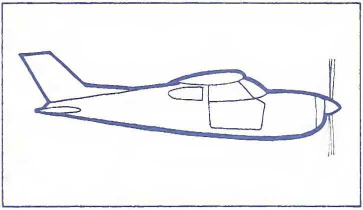
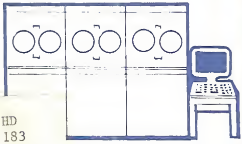






PHASE I DRD
Unit Resource Analysis





BUREAU OF LAND MANAGEMENT

User Requirement Specifications

URA

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IN ORDER TO VISUALIZE THE GENERAL CONCEPT OF INTERFACING WITH A LARGE SCALE AUTOMATED SYSTEM, THE REVIEWER(S) OF THIS DOCUMENT SHOULD BE FAMILIAR WITH THE "USER INTERFACE INTRODUCTION" UNDER SEPARATE COVER.

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DETAILED REQUIREMENTS DEFINITION FOR PLANNING

TABLE OF CONTENTS

Title	Page Number
I. Introduction	PL-1
II. Planning's Role in DRD	PL-3
A. Coordination of Resource URA Components	PL-3
B. Completion of Non-Assigned URA Requirements	PL-5
C. Completion of Planning URA Requirements	PL-5
III. Processing Requirements	PL-6
IV. Probable Impacts	PL-8
V. Summary Review Questions	PL-10
VI. Information Flow Diagrams	PL-11
Planning Information Flow Diagram	PL-12
Example - Lands Resource Management Information Flow Diagram.	PL-17
VII. Summary of Planning Outputs, Initial Inputs, and Maintenance Inputs	PL-20
VIII. Planning Outputs - Descriptions and Samples	PL-22
A. Output - Base Map	PL-23
B. Output - ATROW Overlay	PL-26
C. Output - ATROW Tabulation	PL-30
D. Output - ATROW Narrative	PL-34
E. Output - Aerial Photo Coverage Overlay	PL-36
IX. Planning Inputs - Descriptions and Samples	PL-40
A. Input, Initial - Planning Unit, Resource Area, and District Boundaries	PL-41

B. Input, Maintenance - Planning Unit, Resource Area, and District Boundaries PL-43

C. Input, Initial - U. S. Geological Quads PL-44

D. Input, Maintenance - U. S. Geological Quads PL-49

E. Input, Initial - Access (ATROW) Maps PL-50

F. Input, Maintenance - Access (ATROW) Maps PL-52

G. Input, Initial - Aerial Photos PL-54

H. Input, Maintenance - Aerial Photos PL-56

X. Code Sheet Summary of DRD User Requirements Specifications PL-58

DETAILED REQUIREMENTS DEFINITION FOR PLANNING

I. INTRODUCTION

The Bureau of Land Management Planning System is interwoven throughout all Bureau operations and activities. Such a system is especially important to an agency with management responsibility for approximately 470 million surface acres of public lands and over 600 million acres of subsurface minerals estate. For some years, the Bureau has operated under the principles of multiple use and sustained yield and manages these lands for a variety of values and uses, including: domestic livestock grazing, mineral development, watershed values, wildlife, timber, and recreation. With increasing demands on all of these resources and increased concern for environmental protection, the Bureau's planning system contributes to resource conflict resolution and overall improved resource management decisions.

Furthermore, the Federal Land Policy and Management Act of 1976 specifically requires that the public lands be managed under the principles of multiple use and sustained yield and that such management be in accordance with land use plans. In implementing BLM responsibilibies, the lands and their resources are first inventoried and through the planning system all potential uses of the land are considered. The general sequence is essentially one of inventory, analysis, resource potential, resource conflict resolution, and decision-making. The decision document (known as the Management Framework Plan within BLM) is the land use management plan for a particular planning area. Although use of the Bureau's planning system necessitates continued consideration of the impact of one resource use on other potential resource uses, implementation of the National Environmental Policy Act, requires detailed assessment of the impact of all proposed resource actions on the environment. Because the planning system is comprehensive in scope, it contributes to effective environmental assessment.

In summary, then, the Bureau planning system is one of three major managerial systems used to plan, operate, and evaluate Bureau programs. (It is coordinated with the program management and financial management system and the inspection and evaluation system.) The planning system is used to prepare what are commonly called "Land Use Plans", or plans to allocate discrete public land areas to specific land-use combinations. These plans guide and direct programs for such lands through more detailed stages of functional and program planning and implementation.

In the Detailed Requirements Definition phase of the Strategic Plan, emphasis is placed on the analysis stage of the planning system. The objectives of the Unit Resource Analysis are to:

1. Provide a comprehensive analysis of inventory data, resource problems, conditions, uses, production, quality, capabilities, and management potential for use in preparing Management Framework Plans.

2. Provide summarized resource information pertinent to making land-use decisions on a unit, in one place, and for use in all other phases of resource management, including public contact.

3. Provide a means of achieving continuity in resource data retention and maintenance.

II. PLANNING'S ROLE IN DRD

General: The role of planning in the DRD effort was a three-fold application:

A. Coordination of all technical resource staff inputs and outputs, especially in relation to Unit Resource Analysis Manual (Section 1605) required components.

B. Completion of URA required components not assigned to other DRD resource representatives (core team members).

C. Completion of URA required components for DRD that are the direct responsibility of planning.

Detailed Discussion:

A. Coordination of Resource URA Components: The role of Planning in DRD coordination of all technical resource staff inputs and outputs, especially in relation to URA Manual required components, is based on the role of Planning in everyday application of the Bureau's Planning System i.e., technical inputs are prepared by resource staff specialists, while the planning coordinator incorporates the technical components into the required planning documents. This generally accepted concept of planning's role, as applied to DRD, then is that "planning has no (DRD) inputs, only outputs", or stated another way, "outputs from the technical resource staffs are inputs to planning". Simply stated, Planning's outputs are Base Map (URA Step 1), Physical Profile (Step 2), Resources Present Situation (URA Step 3), and Resource Management Opportunities (URA Step 4). The following three products have resulted from Planning's fulfillment of its coordination role in DRD, and are included in the DRD package:

1. Planning Information Flow Diagram, which is in fact a General Overall DRD Information Flow Diagram.*

2. Summary, by code sheet number, of all DRD resource staffs' efforts to comply with URA Manual requirements.

3. Identification of URA Manual Revision Requirements resulting from DRD.

*NOTE: The Lands Resource Management (System #0122) Information Flow Diagram is included as an example to illustrate how a resource output is a planning input. See, for example, "Current Land Use Overlay and Narrative" on both diagrams.

B. Completion of Non-Assigned URA Requirements: Planning's role in this phase was to complete URA required components not assigned to other DRD resource representatives (core team members). Requirements were completed by Planning DRD for Access (ATROW) and Aerial Photos because neither function was represented in DRD. Both requirements are inputs to URA Step 2 - Physical Profile. The following inputs/outputs descriptions were prepared for Access (ATROW) with samples attached:

- Input, Initial - ATROW Maps (Code sheet #0171-0005)
- Input, Maintenance - ATROW Maps (0006)
- Output - ATROW Overlay (0021)
- Output - ATROW Tabulation (0022)
- Output - ATROW Narrative (0023)

Similarly, the following input/output descriptions were developed for Aerial Photos with attached samples:

- Input, Initial - Aerial Photos (Code sheet # 0171-0007)
- Input, Maintenance - Aerial Photos (0008)
- Output - Aerial Photo Coverage Overlay (0024)

C. Completion of Planning URA Requirements: A direct responsibility of planning in meeting URA requirements for the DRD effort is preparation of the Base Map (URA Step 1) to include identification of major physical features, transportation systems, cadastral survey grid, land status and ownerships, and planning unit, resource area, and district boundaries. The following input/output descriptions were prepared for Base Map with samples attached:

- Input, Initial - Planning Unit, Resource Area, and District Boundaries (Code sheet # 0171-0001)
- Input, Maintenance - Planning Unit, Resource Area, and District Boundaries (0002)
- Input, Initial - U.S. Geological Survey Quads (0003)
- Input, Maintenance - U.S. Geological Survey Quads (0004)
- Output - Base Map (0020)

Another direct responsibility of planning in meeting URA requirements for the DRD effort is preparation of the Environment (Manual Section 1605.5) or Ecological Profile Requirements. However, since Ecological Profile procedures are currently under review/revision, and interim instructions are scheduled to be released shortly, no DRD requirements for Ecological Profile have been included at this time.

III. PROCESSING REQUIREMENTS

Automatic Data Processing generation of the Base Map and the various Resource Overlays is completely dependent upon effective computer graphic capability. Map overlays will be graphically depicted on data terminals at end user locations. Terminals will have Cathode Ray Tube (CRT) display screens, or end users will have the ability to request and direct overlays to a centrally located graphic hard copy display device. This hard copy device will also be an option for use by end users that have CRT devices. Executive retrieval computer models like EXIR, REX, and of course, ADP's data base structure scheme will be used by end users to retrieve data base information in a reportable form. Formating will be accomplished by end users as they make use of the available executive retrieval system.

Upon the inception of this system there will be a massive amount of data required as input. Tabular data will be entered via the Batch mode, user terminal (with customized computer programs that prompt and direct), and via the adopted executive retrieval computer models. Graphic input will be done by making use of the digitization method, unless new technology intervenes in the interim. Digitization will be time consuming and it may be required that various central sites be established in order to accomodate all the user needs.

IV. PROBABLE IMPACTS

Considerable changes will come about in planning procedures and URA Manual guidelines in general with full operation of the DRD phase of the Strategic Plan. Currently, the Base Map and Resource Overlays are manually produced with color codes/symbols used to differentiate various elements. The URA Manual itself is a very detailed "how-to-do-it" cookbook with an appendix of numerous illustrations, forms, and standardized symbols. Application of an ADP process to URA requirements will probably result in a revised URA manual that is more concise, and less detailed, with fewer illustrations and forms, since many standardized procedures will be stored in the data bank. The URA Manual of the future will probably more resemble an ADP User's Guide, with a concise statement of minimal URA requirements and standards to insure plan adequacy and policy compliance. Other probable impacts include:

- Preparation time for Base Map and Resource Overlays will be considerably reduced, once the data base is completed, as the ADP response will be virtually instantaneous, especially with ADP terminals installed in all BLM field offices.

- The logical sequential nature of the planning process will be more apparent because of the orderly step-by-step computer process, i.e., data collection, analysis, interpretation, decision making. In other words, because ADP and Planning utilize a sequential organized approach to data processing/problem solving, they tend to compliment and reinforce each other.

— Plan product quality should increase because plan procedures will be machine programmed, which will allow the technical resource specialists to concentrate on more important matters such as data analysis, identification of resource implications and management alternatives, and effective public involvement in the planning process. Also, plan quality should increase because pre-planning data gaps will be readily apparent on an ADP system.

— Updates of plan products will be available on a more frequent basis because of the time-saving features of ADP.

— Since map codes and symbols will be computer generated, they will consist of dot/line grid delineations in place of manually drawn color pen illustrations.

— Those impacts identified under General Impacts will also apply, of course, such as ADP User Orientation/Training Costs, initial ADP system start-up costs, etc.

V. SUMMARY REVIEW QUESTIONS

The following specific review questions are included to guide the reviewer through the DRD-URA package for Planning. They are intended to supplement those general review questions provided for purposes of uniform guidance.

— Did you find the Planning Information Flow Diagram helpful in better understanding the overall URA/ADP application through the DRD effort?

— Was the summary of all DRD Resource staff efforts (by code sheet number) to comply with URA Manual requirements, also useful to you in your review?

— Did you find the Planning-generated inputs and outputs complete or are there additional requirements that need to be included (or changes to existing inputs/outputs)?

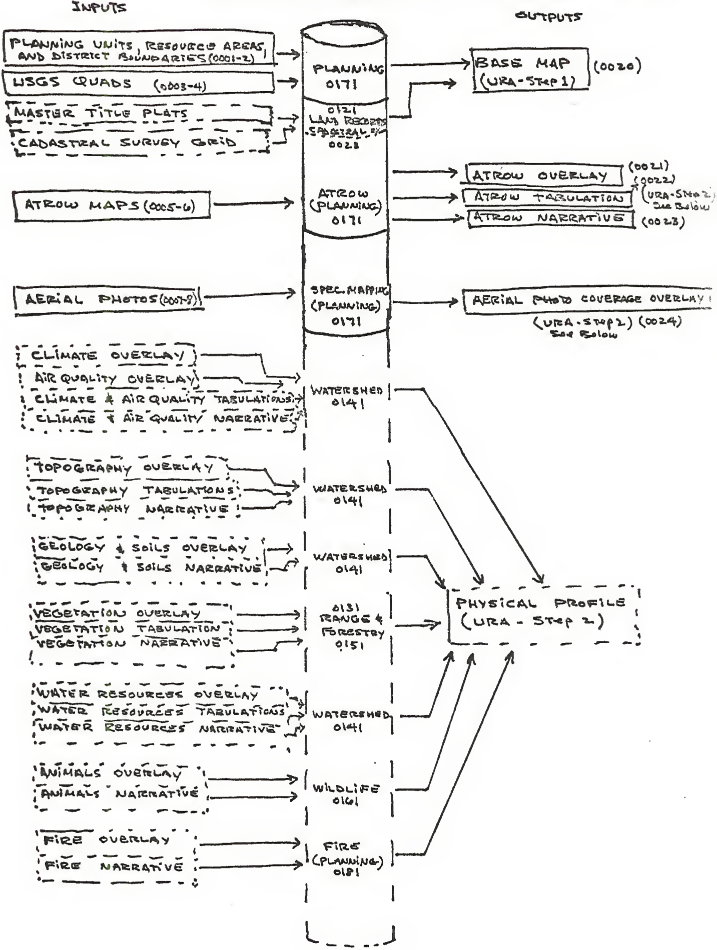
— Have you identified additional probable impacts in the planning process as a result of the DRD effort?

— Do you agree with the frequency and volume estimates on the Input/Output Descriptions for Planning?

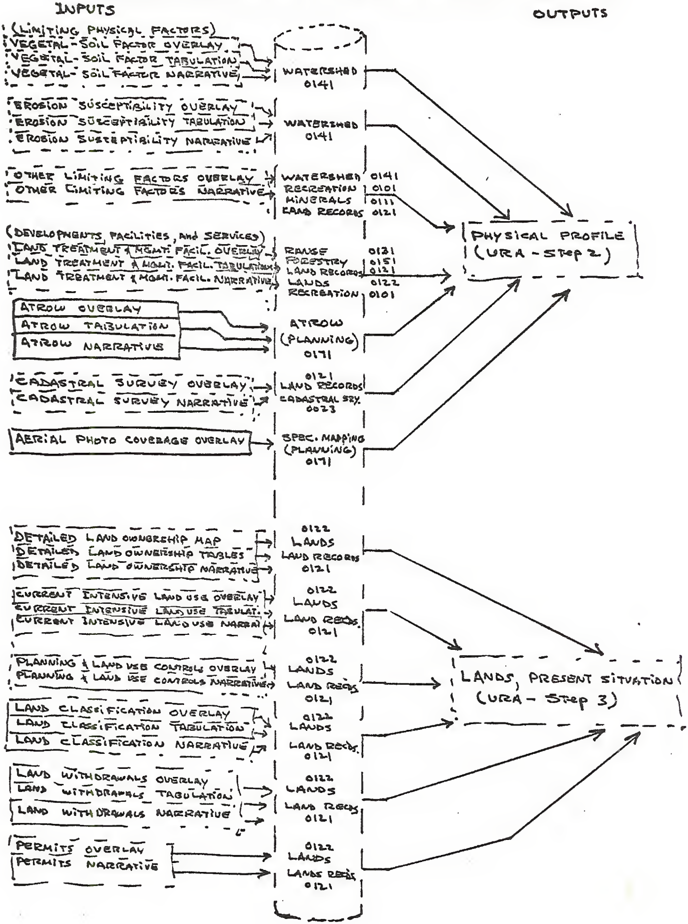
— Are the processing requirements for planning elements realistic, especially those identified for ADP graphic generation?

VI. INFORMATION FLOW DIAGRAMS

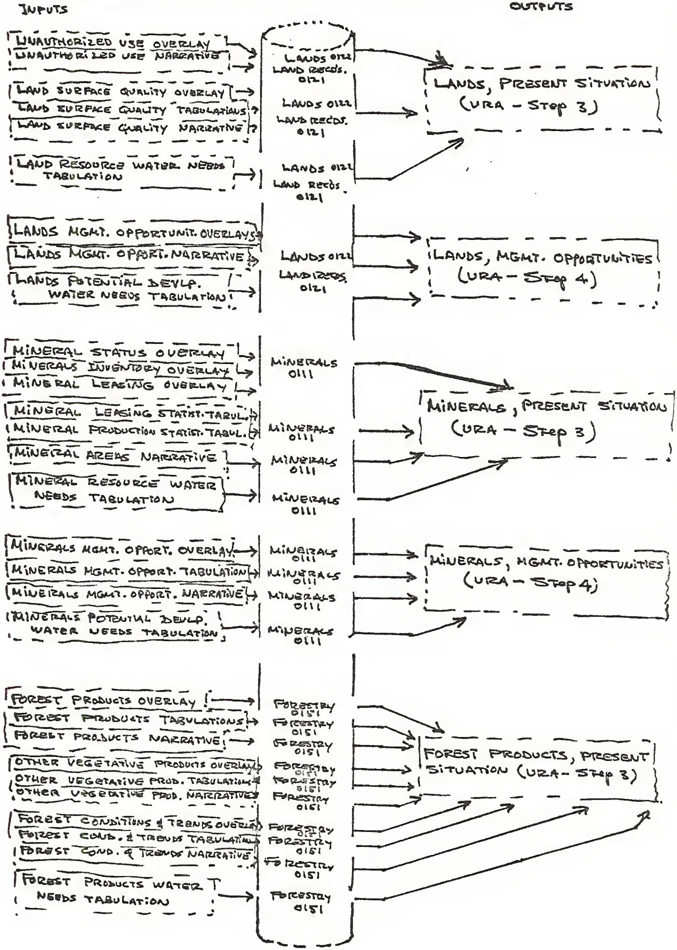
PLANNING INFORMATION FLOW DIAGRAM (SYS# 0171)



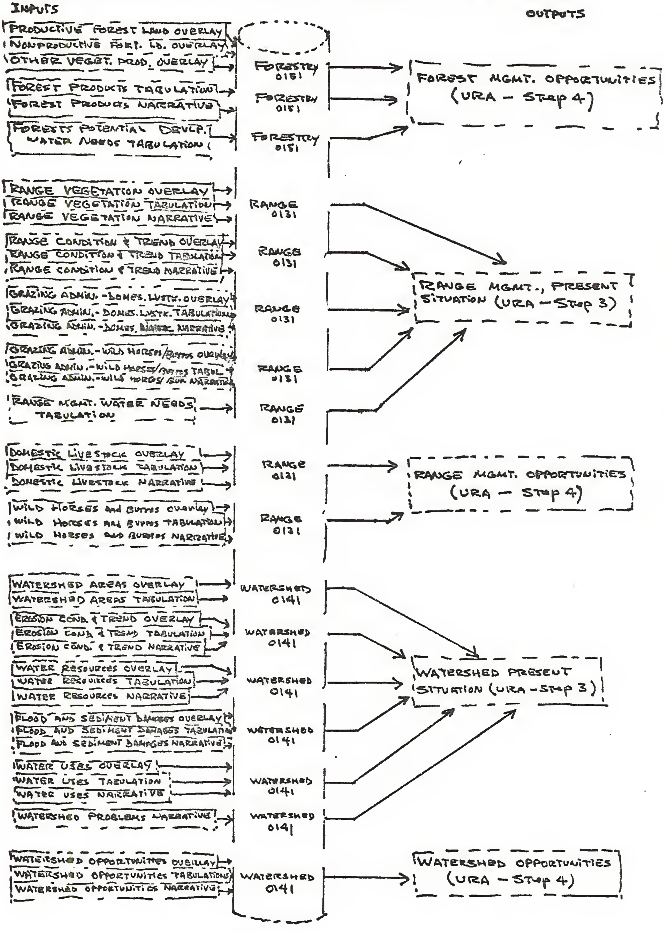
PLANNING INFORMATION FLOW DIAGRAM, CONTINUED — P.2


INPUTS
OUTPUTS
(LIMITING PHYSICAL FACTORS)
VEGETAL-SOIL FACTOR OVERLAY
VEGETAL-SOIL FACTOR TABULATION
VEGETAL-SOIL FACTOR NARRATIVE
WATERSHED 0141
EROSION SUSCEPTIBILITY OVERLAY
EROSION SUSCEPTIBILITY TABULATION
EROSION SUSCEPTIBILITY NARRATIVE
WATERSHED 0141
OTHER LIMITING FACTORS OVERLAY
OTHER LIMITING FACTORS NARRATIVE
WATERSHED 0141
RECREATION 0101
MINERALS 0111
LAND RECORDS 0121
(DEVELOPMENTS, FACILITIES, AND SERVICES)
LAND TREATMENT & MGMT. FACIL. OVERLAY
LAND TREATMENT & MGMT. FACIL. TABULATION
LAND TREATMENT & MGMT. FACIL. NARRATIVE
RANGE 0131
FORESTRY 0151
LAND RECORDS 0121
LANDS 0122
RECREATION 0101
ATROW OVERLAY
ATROW TABULATION
ATROW NARRATIVE
ATROW (PLANNING) 0171
CADASTRAL SURVEY OVERLAY
CADASTRAL SURVEY NARRATIVE
0121 LAND RECORDS
CADASTRAL SRY. 0023
AERIAL PHOTO COVERAGE OVERLAY
SPEC. MAPPING (PLANNING) 0171
PHYSICAL PROFILE (URA - STEP 2)
DETAILED LAND OWNERSHIP MAP
DETAILED LAND OWNERSHIP TABLES
DETAILED LAND OWNERSHIP NARRATIVE
0122 LANDS
LAND RECORDS 0121
CURRENT INTENSIVE LAND USE OVERLAY
CURRENT INTENSIVE LAND USE TABULAT.
CURRENT INTENSIVE LAND USE NARRAT.
0122 LANDS
LAND RECS. 0121
PLANNING & LAND USE CONTROLS OVERLAY
PLANNING & LAND USE CONTROLS NARRATIVE
0122 LANDS
LAND RECS 0121
LAND CLASSIFICATION OVERLAY
LAND CLASSIFICATION TABULATION
LAND CLASSIFICATION NARRATIVE
0122 LANDS
LAND RECS. 0121
LAND WITHDRAWALS OVERLAY
LAND WITHDRAWALS TABULATION
LAND WITHDRAWALS NARRATIVE
0122 LANDS
LAND RECS 0121
PERMITS OVERLAY
PERMITS NARRATIVE
0122 LANDS
LANDS RECS 0121
LANDS, PRESENT SITUATION (URA - STEP 3)

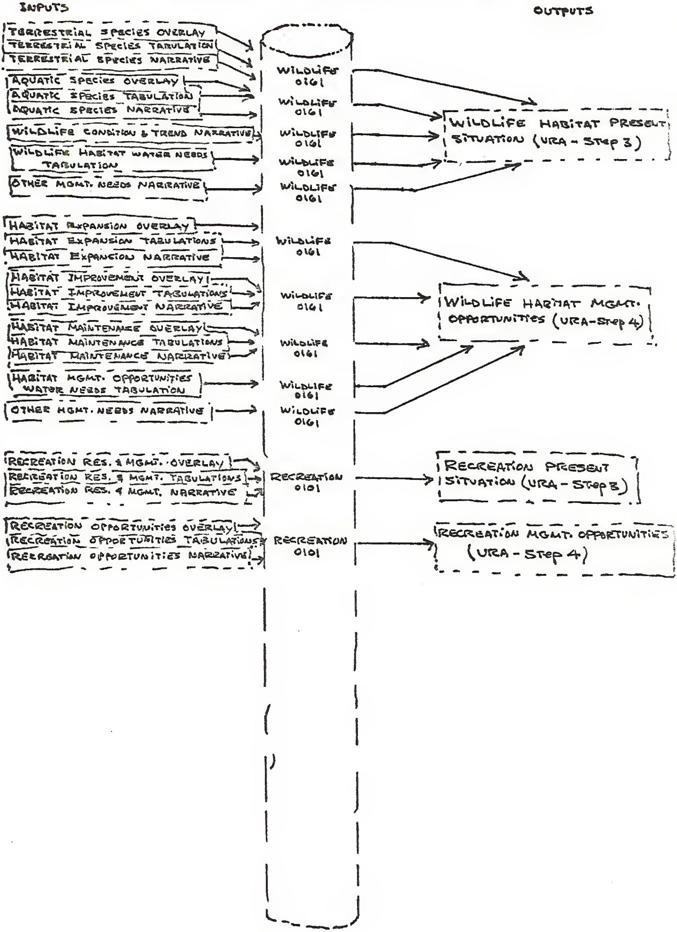
PLANNING INFORMATION FLOW DIAGRAM, CONTINUED — P. 3


INPUTS
OUTPUTS
UNAUTHORIZED USE OVERLAY
UNAUTHORIZED USE NARRATIVE
LAND SURFACE QUALITY OVERLAY
LAND SURFACE QUALITY TABULATIONS
LAND SURFACE QUALITY NARRATIVE
LAND RESOURCE WATER NEEDS TABULATION
LANDS 0122
LAND RECDS. 0121
LANDS 0122
LAND RECDS. 0121
LANDS 0122
LAND RECDS. 0121
LANDS, PRESENT SITUATION (URA – Step 3)
LANDS MGMT. OPPORTUNIT. OVERLAYS
LANDS MGMT. OPPORT. NARRATIVE
LANDS POTENTIAL DEVLP. WATER NEEDS TABULATION
LANDS 0122
LAND RECDS 0121
LANDS, MGMT. OPPORTUNITIES (URA – Step 4)
MINERAL STATUS OVERLAY
MINERALS INVENTORY OVERLAY
MINERAL LEASING OVERLAY
MINERALS 0111
MINERAL LEASING STATIST. TABUL.
MINERAL PRODUCTION STATIST. TABUL.
MINERALS 0111
MINERAL AREAS NARRATIVE
MINERALS 0111
MINERAL RESOURCE WATER NEEDS TABULATION
MINERALS 0111
MINERALS, PRESENT SITUATION (URA – Step 3)
MINERALS MGMT. OPPORT. OVERLAY
MINERALS 0111
MINERALS MGMT. OPPORT. TABULATION
MINERALS 0111
MINERALS MGMT. OPPORT. NARRATIVE
MINERALS 0111
MINERALS POTENTIAL DEVLP. WATER NEEDS TABULATION
MINERALS 0111
MINERALS, MGMT. OPPORTUNITIES (URA – Step 4)
FOREST PRODUCTS OVERLAY
FORESTRY 0151
FOREST PRODUCTS TABULATIONS
FORESTRY 0151
FOREST PRODUCTS NARRATIVE
FORESTRY 0151
OTHER VEGETATIVE PRODUCTS OVERLAY
FORESTRY 0151
OTHER VEGETATIVE PROD. TABULATIONS
FORESTRY 0151
OTHER VEGETATIVE PROD. NARRATIVES
FORESTRY 0151
FOREST CONDITIONS & TRENDS OVERLAY
FORESTRY 0151
FOREST COND. & TRENDS TABULATIONS
FORESTRY 0151
FOREST COND. & TRENDS NARRATIVE
FORESTRY 0151
FOREST PRODUCTS WATER NEEDS TABULATION
FORESTRY 0151
FOREST PRODUCTS, PRESENT SITUATION (URA – Step 3)

PLANNING INFORMATION FLOW DIAGRAM, CONTINUED — p.4


INPUTS
OUTPUTS
PRODUCTIVE FOREST LAND OVERLAY
NONPRODUCTIVE FORT. LD. OVERLAY
OTHER VEGET. PROD. OVERLAY
FORESTRY 0151
FOREST PRODUCTS TABULATION
FOREST PRODUCTS NARRATIVE
FORESTRY 0151
FORESTS POTENTIAL DEVLP. WATER NEEDS TABULATION
FORESTRY 0151
FOREST MGMT. OPPORTUNITIES (URA – STEP 4)
RANGE VEGETATION OVERLAY
RANGE VEGETATION TABULATION
RANGE VEGETATION NARRATIVE
RANGE 0131
RANGE CONDITION & TREND OVERLAY
RANGE CONDITION & TREND TABULATION
RANGE CONDITION & TREND NARRATIVE
RANGE 0131
GRAZING ADMIN. - DOMES. LVSTK. OVERLAY
GRAZING ADMIN. - DOMES. LVSTK. TABULATION
GRAZING ADMIN. - DOMES. ~~LVSTK.~~ NARRATIVE
RANGE 0131
GRAZING ADMIN. - WILD HORSES/BURROS OVERLAY
GRAZING ADMIN. - WILD HORSES/BURROS TABUL.
GRAZING ADMIN. - WILD HORSES/BUR. NARRATIVE
RANGE 0131
RANGE MGMT. WATER NEEDS TABULATION
RANGE 0131
RANGE MGMT., PRESENT SITUATION (URA – STEP 3)
DOMESTIC LIVESTOCK OVERLAY
DOMESTIC LIVESTOCK TABULATION
DOMESTIC LIVESTOCK NARRATIVE
RANGE 0121
RANGE MGMT. OPPORTUNITIES (URA – STEP 4)
WILD HORSES AND BURROS OVERLAY
WILD HORSES AND BURROS TABULATION
WILD HORSES AND BURROS NARRATIVE
RANGE 0131
WATERSHED AREAS OVERLAY
WATERSHED AREAS TABULATION
WATERSHED 0141
EROSION COND. & TREND OVERLAY
EROSION COND. & TREND TABULATION
EROSION COND. & TREND NARRATIVE
WATERSHED 0141
WATER RESOURCES OVERLAY
WATER RESOURCES TABULATION
WATER RESOURCES NARRATIVE
WATERSHED 0141
FLOOD AND SEDIMENT DAMAGES OVERLAY
FLOOD AND SEDIMENT DAMAGES TABULATION
FLOOD AND SEDIMENT DAMAGES NARRATIVE
WATERSHED 0141
WATER USES OVERLAY
WATER USES TABULATION
WATER USES NARRATIVE
WATERSHED 0141
WATERSHED PROBLEMS NARRATIVE
WATERSHED 0141
WATERSHED PRESENT SITUATION (URA – STEP 3)
WATERSHED OPPORTUNITIES OVERLAY
WATERSHED OPPORTUNITIES TABULATIONS
WATERSHED OPPORTUNITIES NARRATIVE
WATERSHED 0141
WATERSHED OPPORTUNITIES (URA – STEP 4)

PLANNING INFORMATION FLOW DIAGRAM, CONTINUED — P.5


INPUTS
OUTPUTS
TERRESTRIAL SPECIES OVERLAY
TERRESTRIAL SPECIES TABULATION
TERRESTRIAL SPECIES NARRATIVE
AQUATIC SPECIES OVERLAY
AQUATIC SPECIES TABULATION
AQUATIC SPECIES NARRATIVE
WILDLIFE CONDITION & TREND NARRATIVE
WILDLIFE HABITAT WATER NEEDS TABULATION
OTHER MGMT. NEEDS NARRATIVE
WILDLIFE 0161
WILDLIFE 0161
WILDLIFE 0161
WILDLIFE 0161
WILDLIFE 0161
WILDLIFE HABITAT PRESENT SITUATION (URA - STEP 3)
HABITAT EXPANSION OVERLAY
HABITAT EXPANSION TABULATIONS
HABITAT EXPANSION NARRATIVE
HABITAT IMPROVEMENT OVERLAY
HABITAT IMPROVEMENT TABULATIONS
HABITAT IMPROVEMENT NARRATIVE
HABITAT MAINTENANCE OVERLAY
HABITAT MAINTENANCE TABULATIONS
HABITAT MAINTENANCE NARRATIVE
HABITAT MGMT. OPPORTUNITIES WATER NEEDS TABULATION
OTHER MGMT. NEEDS NARRATIVE
WILDLIFE 0161
WILDLIFE 0161
WILDLIFE 0161
WILDLIFE 0161
WILDLIFE 0161
WILDLIFE HABITAT MGMT. OPPORTUNITIES (URA-STEP 4)
RECREATION RES. & MGMT. OVERLAY
RECREATION RES. & MGMT. TABULATIONS
RECREATION RES. & MGMT. NARRATIVE
RECREATION 0101
RECREATION PRESENT SITUATION (URA - STEP 3)
RECREATION OPPORTUNITIES OVERLAY
RECREATION OPPORTUNITIES TABULATIONS
RECREATION OPPORTUNITIES NARRATIVE
RECREATION 0101
RECREATION MGMT. OPPORTUNITIES (URA - STEP 4)

5. INFORMATION FLOW

(page 1 of 3)

LANDS RESOURCE MANAGEMENT (Sys # 0122)

INPUTS (33)

OUTPUTS (41)

(Survey Records) - - - - - - (0127) Cadastral Survey

(Base Map Records) - - - - - (0127) Cadastral Survey

(Land Records) - - - - - - - (0121) Lands Rcds.

State Land Use and Ownership Data------- 2050

Local Government Land Use and Ownership Data--- 2060

Quasi-Governmental Land Use and Ownership Data Within Planning Unit- 2105

Current Land Use, Urban-Suburban Within Planning Unit Overlay 2130

Current Land Use, Agriculture Within Planning Unit Overlay 2140

Current Land Use, Electronic Sites Overlay-------------- 2150

Current Land Use, Utility Systems Overlay-------------- 2160

Current Land Use, Public Purposes Overlay-------------- 2165

Current Land Use, Utility Corridors Overlay-------------- 2167

Current Land Use, Controls and Zoning Overlay-------------- 2170

(0122) LANDS RESOURCE MANAGEMENT

2070 ----- Acres Land Ownership Within Planning Unit By County

2080 ----- Federal Agency Jurisdiction Acreage Within Planning Unit

2090 ----- State Agency Ownership Acres By Planning Uni

2100 ----- Local Government Ownership By Planning Unit

2105 ----- Quasi-Governmental Ownership Acres By Planning Unit

2110 ----- Land Use and Ownership By Planning Unit

2120 ----- Rights Of Way Within Planning Unit

2130 ----- Current Land Use Urban-Suburban Overlay and Narrative

2140 ----- Current Land Use Agriculture Overlay and Narrative

2150 ----- Current Land Use, Electronic Sites Overlay and Narrative

2160 ----- Current Land Use, Utilit Systems Overlay and Narrative

2165 ----- Current Land Use, Public Purposes Overlay and Narrative

2167 ----- Current Land Use, Utilit Corridors Overlay and Narrative

2170 ----- Current Land Use, Contro and Zoning Overlay and Narrative

(Data Base)

5. INFORMATION FLOW (continued)
(page 2 of 3)

LANDS RESOURCE MANAGEMENT (Sys # 0122)

INPUTS		(0122) LANDS RESOURCE MANAGEMENT		OUTPUTS
Land Classifications Within Planning Unit Overlay	2180		2180	Land Classifications Within Planning Unit Overlay and Narrative
Withdrawals Within Planning Unit Overlay	2190		2190	Withdrawals Within Planning Unit Overlay and Narrative
			2200	Land Classifications Within Planning Unit
			2210	Land Withdrawals Within Planning Unit
			2220	Land-Mineral Use Authorization Within Planning Unit
Land-Mineral Use Authorization Within Planning Unit Overlay	2230		2230	Land-Mineral Use Authorizations Within Planning Unit Overlay and Narrative
Unauthorized Use Identified Within Planning Unit	2240		2240	Unauthorized Use Identified Within Planning Unit
Unauthorized Use Identified Within Planning Unit Overlay	2250		2250	Unauthorized Use Identified Within Plan. Unit Overlay and Narrative
Lands Environmental Quality Within Planning Unit Overlay	2260		2260	Lands Environmental Quality Within Plan. Unit Overlay and Narrative
Annual Water Consumption Requirements For Uses Within Plan. Units	2270		2270	Annual Water Consumption Requirements
Urban-Suburban Expansion Area and Acreage Within Planning Unit	2280		2280	Urban-Suburban Expansion Areas and Acreage
Urban-Suburban Expansion Area Location Within Plan. Unit Overlay	2290		2290	Urban-Suburban Expansion Area Location Within Plan. Unit Overlay
Potential Intensive Use Acreage Within Planning Unit	2300		2300	Potential Intensive Use Acreage Within Plannin Unit
Potential Intensive Use Locations Within Plan. Unit Overlay	2310		2310	Potential Intensive Use Locations Within Plan. Unit Overlay
Potential Public Purpose Site Acreage Within Planning Unit	2320		2320	Potential Public Purpose Site Acreage Within Planning Unit
Potential Public Purpose Site Location Within Plan. Unit Overlay	2330		2330	Potential Public Purpose Site Location Within Plan. Unit Overlay

(Data Base)

5. INFORMATION FLOW (continued) LANDS RESOURCE MANAGEMENT (Sys # 0122)

(page 3 of 3)

INPUTS		OUTPUTS
Potential Agricultural Lands Acreage Within Planning Unit-------- 2340	(0122) LANDS RESOURCE MANAGEMENT	2340 ----- Potential Agricultural Lands Acreage Within Planning Unit
Potential Agricultural Lands Location Within Plan. Unit Overlay--- 2350		2350 ----- Potential Agricultural Lands Location Within Plan. Unit Overlay
Potential Utility System Location Within Plan. Unit Overlay--------- 2355		2355 ----- Potential Utility System Location Within Plan. Unit Overlay
Potential Powerline and Corridor Locations Within Planning Unit Overlay-------------- 2360		2360 ----- Potential Powerline and Corridor Locations Within Planning Unit Overlay
Potential Major Transportation Systems Within Planning Unit Overlay-------------- 2370		2370 ----- Potential Major Transportation Systems Within Planning Unit Overlay
Potential Electronic Site Locations Within Planning Unit Overlay-------------- 2380		2380 ----- Potential Electronic Site Locations Within Planning Unit Overlay
Withdrawal Restoration Opportunities Within Plan. Unit Overlay--- 2390		2390 ----- Withdrawal Restoration Opportunities Within Plan. Unit Overlay
Unauthorized Use Termination Opportunities Within Planning Unit Overlay-------------- 2400		2400 ----- Unauthorized Use Termination Opportunities Within Plan. Unit Overlay
Land Quality Improvement Opportunities Within Planning Unit Overlay-------------- 2410		2410 ----- Land Quality Improvement Opportunities Within Planning Unit Overlay
Potential Land Uses Requiring Water Within Planning Unit-------- 2420		2420 ----- Potential Land Uses Requiring Water Within Planning Unit
(Water Data - furnished by Lands on Water Consumption forms prepared by Watershed)-	(0145) Water-shed	
		2500 ----- URA-4 Narrative

(Data Base)

VII. SUMMARY OF PLANNING OUTPUTS, INITIAL INPUTS, AND MAINTENANCE INPUTS

SUMMARY

PLANNING: OUTPUTS, INITIAL INPUTS, MAINTENANCE INPUTS. (System #0171)

I. Base Map:

A. Output - Base Map (with sample) (0171-0020)

B. Input, Initial - P.U., R.A., And District Boundaries (with sample) (0171-0001)

C. Input, Maintenance - P.U., R.A., And District Boundaries (0171-0002)

D. Input, Initial - USGS Quads (with samples) (0171-0003)

E. Input, Maintenance - USGS Quads (0171-0004)

II. Access:

A. Output - ATROW Overlay (with samples) (0171-0021)

B. Output - ATROW Tabulation (with samples) (0171-0022)

C. Output - ATROW Narrative (0171-0023)

D. Input, Initial - ATROW Maps (with sample) (0171-0005)

E. Input, Maintenance - ATROW Maps (with sample) (0171-0006)

III. Aerial Photos:

A. Output - Aerial Photo Coverage Overlay (with sample) (0171-0024)

B. Input, Initial - Aerial Photos (with sample) (0171-0007)

C. Input, Maintenance - Aerial Photos (with sample) (0171-0008)

VIII. PLANNING OUTPUTS - DESCRIPTIONS AND SAMPLES

Prog. Area: P&EC
Prep. By: DHS & BAD
Date: 7/25/77
Code Sheet #: 0171-0020

OUTPUT DESCRIPTION
Page 1 of 2

OUTPUT TITLE: Base Map

OUTPUT FORM: Map on MYLAR

OUTPUT DESCRIPTION: A graphic display/hard copy, of planning unit or subcomponent there-of, which serves as the basic reference source for all Planning Overlays.

USER(s): All Resources

LOCATION(s):
Districts - Areas
State Offices
DSC

USAGE:

All planning & environmental activities

ACCESS LIMITATIONS: None

RESPONSE TIMES: DESIRED: Immediately REQUIRED: 5 minutes

FREQUENCY OF PRODUCTION: Average of once every 5 years; base maps are prepared more frequently if they encompass high activity or rapidly changing areas.

DEPENDENCIES:
Depends on inputs; (1) Master Title Plats (Land Records) (2) USGS Quads & (3) Planning Units Boundaries.

REQUEST PARAMETERS:
State, District, Resource Area, Planning Unit, possibly county,

Code Sheet# 0171-0020

OUTPUT DESCRIPTION
Page 2 of 2

OUTPUT TITLE: Base Map

SORT ORDER: State, District, Resource Area, Planning Unit, Possibly County.

ESTIMATED VOLUME: 120 Base Maps per year (600 planning units,)
(with five-year update)

COMPUTATIONS/PROCESSES:

N/A

ACCURACY: Within 5%

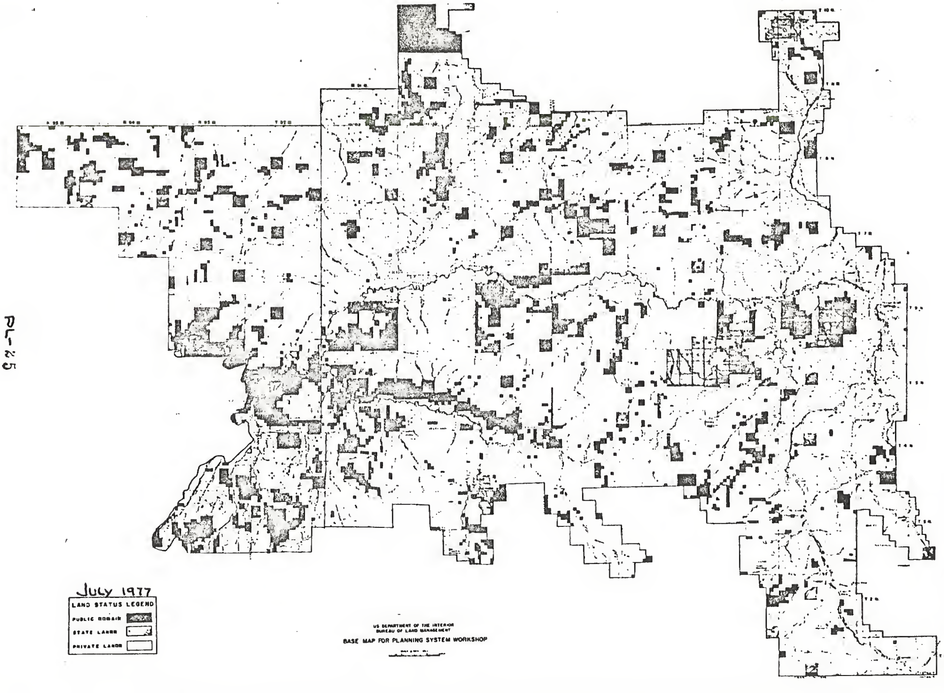
SCALE: Variable dependent on size of planning area and complexity of Resource Values, Management Problems & Opportunities.
Typical scales used Range from 1/2" = 1 mile to 2" = 1 mile.

ANNOTATIONS: Map should show Cadastral Survey Grid, land status (withdrawn, vacant public domain), and other ownerships such as state, county, private, etc., according to standard map symbols.

LEGEND: Land Status Legend should be delineated as follows:
Public Domain - Black
State Lands - Gray
Private Lands - White

REMARKS:
See attached example of Base Map.
Date Map as to when prepared, and note each revision date.

PL-25



JULY 1977

US DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

BASE MAP FOR PLANNING SYSTEM WORKSHOP

Code Sheet # 017-0020

Prog. Area: Plan. & E.C.
Prep. By: DHS & BAD
Date: 8/9/77
Code Sheet#: 0171-0021

OUTPUT DESCRIPTION
Page 1 of 2

OUTPUT TITLE: Physical Access and Transportation Rights-of-Way (ATROW)

OUTPUT FORM: Overlay

OUTPUT DESCRIPTION: A base map overlay showing physical access to or on public lands administered by BLM. (See attached example).

USER(s): All Resources.

LOCATION(s): Districts - Areas
State Offices

USAGE: All planning and Environmental Activities.

ACCESS LIMITATIONS: None

RESPONSE TIMES: DESIRED: Immediately REQUIRED: 5 minutes

FREQUENCY OF PRODUCTION: Input to URA/MFP. 120 Overlays produced average of once a year. Complete update of all 600 ATROW Base Map Overlays over 5-year cycle

DEPENDENCIES: Dependent on data input from ATROW (Access & Transportation Right-of-Way Staff.)

REQUEST PARAMETERS: State, District, Resource Area, Planning Unit.

OUTPUT DESCRIPTION
Page 2 of 2

OUTPUT TITLE: Physical Access and Transportation Rights-of-Way (ATROW)

SORT ORDER: State, District, Resource Area, Planning Unit.

ESTIMATED VOLUME: Average 120 base map overlays per year.

COMPUTATIONS/PROCESSES:

N/A

ACCURACY:

Within 5%.

SCALE:

Variable dependent on size of planning area and complexity of resource values, mgmt. problems and opportunities. Typical scales used range from 1/2" = 1 mile to 2" = 1 mile.

ANNOTATIONS:

See Attached Sheet.

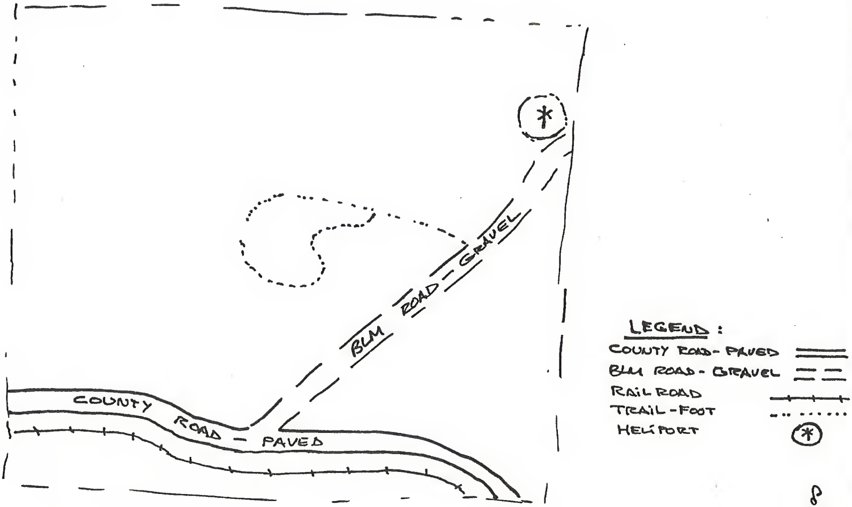
LEGEND:

See Attached Sheet.

REMARKS:

Physical access is defined as a usable road or trail in which there is no legal authority for use of the right-of-way by either the public generally or BLM personnel for administrative purposes. Where it is not clear whether a road or trail furnishes public access to the public lands, DSC-ATROW Staff should be consulted.

PHYSICAL ACCESS AND TRANSPORTATION RIGHTS-OF-WAY (ATROW) - OVERLAY



Code Sheet #: 0171-0021

PHYSICAL ACCESS – LEGEND

[redacted] Show the following access routes, (differentiate by symbol and line [redacted] code and coordinate with the code system in Manual section 9111).

Code Sheet#:
0171-0021

(1) County roads.
  (a) Paved.
  (b) Gravel.
  (c) Dirt.

(2) BLM roads.
  (a) Paved.
  (b) Gravel.
    (i) One-lane.
    (ii) Two-lane.
  (c) Dirt.
    (i) Two-wheel drive.
    (ii) Four-wheel drive.

(3) Private and other roads (roads for non-BLM purposes, i.e., communication site roads, mining claim roads, etc.).

(4) Trails.
  (a) Foot.
  (b) Horse.
  (c) Bicycle.
  (d) Motorcycle.
  (e) Combination.

[redacted] Also, show the other access means such as:

(1) Airstrips.
  (a) Surfaced.
  (b) Gravel.
  (c) Dirt.

(2) Heliports.

(3) Railroads.

(4) Water access.

Prog. Area: Plan.&E.C.
Prep. By: DHS & BAD
Date: 8/9/77
Code Sheet#: 0171-0022

OUTPUT DESCRIPTION
Page 1 of 2

OUTPUT TITLE: Physical Access and Transportation Rights-of-Way (ATROW)

OUTPUT FORM: Tabulation - Data Table

OUTPUT DESCRIPTION: A tabulation of access developments shown on the ATROW overlay. (See attached example).

USER(s): All Resources

LOCATION(s): Districts - Areas
State Offices

USAGE:
All planning and environmental activities.

ACCESS LIMITATIONS: None

RESPONSE TIMES: DESIRED: Immediately REQUIRED: 5 minutes

FREQUENCY OF PRODUCTION: Input to URA/MFP. 120 tables produced average of once a year. Complete update of all 600 ATROW Data Tables over 5-year cycle.

DEPENDENCIES:
Dependent on data input from ATROW (Access & Transportation Right-of-Way Staff.)

REQUEST PARAMETERS:
State, District, Resource Area, Planning Unit.

Code Sheet #: 0171-0022

OUTPUT DESCRIPTION
Page 2 of 2

OUTPUT TITLE: Physical Access and Transportation Rights-of-Way (ATROW)

SORT ORDER: Same as request parameters.

ESTIMATED VOLUME: Average 120 data tables per year.

COMPUTATIONS/PROCESSES: N/A

ACCURACY: Within 5%.

SCALE: N/A

ANNOTATIONS: See Attached Example.

LEGEND: See Attached Example.

REMARKS: N/A

1605 - UNIT RESOURCE ANALYSIS

Code Sheet #: 0171-0022

Format For

Access Tabulation

P.U. Red Lodge

Date 4/1/75

By Sam Jackson

1) Access Name	2) Standard or Length of Strip	3) Maintenance Responsibility	4) Periods of Unusability	5) Vehicle Restrictions	6) Right/Way Widths
Red Lodge Airport	4,000	County	None	Gen. Aircraft	300'
Peterson Rd.	1-lane	County	Oct.-Apr.	None	66'
Elk Cr. Rd.	1-lane	BLM	Nov.-Mar.	None	N/A
Sand Cr. Rd.	2-lane	BLM	None	No public travel	100'
Big Butte Rd.	2-lane	BLM	None	See R/W Agr. M-70	N/A
White Mtn. Rd.	1-lane	Permittees SLUP #2471 #7238	Nov.-Apr.	4-wheel only	100' access pvt. property
Windy Peak Trail	6.5 mi.	BLM	Limited Nov.-May June-Oct.	Snowmobile only Foot travel only	25 acres pvt. land RE-R-228

Code Sheet #: 0171-0022

1) Include roads, airstrips, heliports.
2) Design standard - i.e., 2-lane, 35 mph; 1-lane, 15 mph, etc.
3) Agency which has the maintenance responsibility, i.e., tax county, state, SCS, BLM, permittees, etc.
4) Any time of the year when conditions cause the road to be closed or untravelable.
5) Types of vehicles which cannot utilize the road because of its construction or standard, i.e., tractor-trailers, buses, passenger cars, ORV, etc.
6) For roads which cross public land indicate the width if any, i.e., 50 feet, perscriptive, etc. For BLM roads which cross private land show the acquired width.

Prog. Area: Plan.&E.C.
Prep. By: DHS & BAD
Date: 8/9/77
Code Sheet #: 0171-0023

OUTPUT DESCRIPTION
Page 1 of 2

OUTPUT TITLE: Physical Access and Transportation Rights-of-way (ATROW)

OUTPUT FORM:
Narrative

OUTPUT DESCRIPTION:
A brief description of the quality and condition of each access facility listed in the ATROW Tabulation and shown on the overlay.

USER(s): All Resources

LOCATION(s): Districts - Areas
State Offices

USAGE:
All planning and environmental activities.

ACCESS LIMITATIONS:
None

RESPONSE TIMES: DESIRED: Immediately REQUIRED: 5 minutes

FREQUENCY OF PRODUCTION: Input to URA/MFP. 120 narratives produced average of once a year. Complete update of all 600 ATROW narratives over 5-year cycle.

DEPENDENCIES:
Dependent on data input from ATROW (Access & Transportation Rights-of-Way Staff).

REQUEST PARAMETERS: State, District, Resource Area, Planning Unit.

Code Sheet#: 0171-0023

OUTPUT DESCRIPTION
Page 2 of 2

OUTPUT TITLE: Physical Access and Transportation Rights-of-way (ATROW)

SORT ORDER: Same as request parameters.

ESTIMATED VOLUME: Average 120 narratives per year.

COMPUTATIONS/PROCESSES:

In the case of airstrips and heliports, discuss if BLM has permission to use the facility. Describe and discuss any land-use problems associated with any of the access facilities.

ACCURACY: Within 5%.

SCALE: N/A

ANNOTATIONS: N/A

LEGEND:

N/A

REMARKS:

N/A

Prog. Area: Plan.&Env.Coord
Prep. By: DHS&BAD
Date: 8/10/77

Code Sheet#: 0171-0024

OUTPUT DESCRIPTION
Page 1 of 2

OUTPUT TITLE: Aerial Photo Coverage

OUTPUT FORM: Overlay to Base Map

OUTPUT DESCRIPTION: An overlay which indicates the extent, date, scale, and index code of existing aerial photos for each planning unit. (See attached example.)

USER(s): All resources

LOCATION(s): Districts - Areas
State Offices

USAGE:
All planning and environmental activities.

ACCESS LIMITATIONS: None

RESPONSE TIMES: DESIRED: Immediately REQUIRED: 5 minutes

FREQUENCY OF PRODUCTION:
Input to URA/MFP. 120 Overlays produced average of once a year. Complete update of all 600 Aerial Photo Base Map Overlays over 5-year cycle.

DEPENDENCIES:
Dependent on updated aerial photos from Office of Special Mapping (BLM-DSC) and EROS Data Center in Sioux Falls.

REQUEST PARAMETERS:
State, District, Resource Area, Planning Unit.

Code Sheet#: 0171-0024

OUTPUT DESCRIPTION
Page 2 of 2

OUTPUT TITLE: Aerial Photo Coverage

SORT ORDER: State, District, Resource Area, Planning Unit.

ESTIMATED VOLUME: Average 120 base map overlays per year. Average 800 aerial photos (9"x9") per planning unit base map overlay.

COMPUTATIONS/PROCESSES:

Alternate photo centers should be shown on the overlay by a dot and photo number.

ACCURACY: Within 5%

SCALE:

Aerial photo scales (BLM) range from 1/2" = 1 mile to 4" = 1 mile, with the typical scale being 2" = 1 mile.

ANNOTATIONS:

A line grid delineating each (9" x 9") photo covering a planning unit, i.e. The extent of aerial photo coverage for each planning unit.

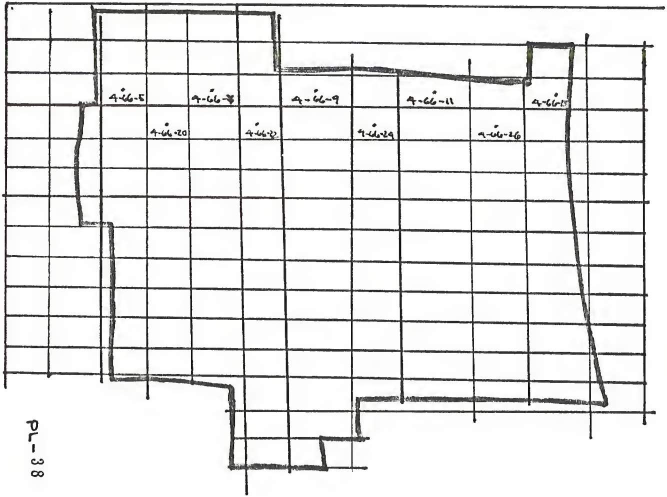
LEGEND:

Photo date - example photo, 6/18/73
Photo scale - example, 1:31,680 (1/2 inch represents 1 mile)
Index code of existing photos - BLM-A-H (New Mexico) example.
Photo number - example 4-66-5

REMARKS:

N/A

AERIAL PHOTO COVERAGE — OVERLAY



PL-38

LEGEND:

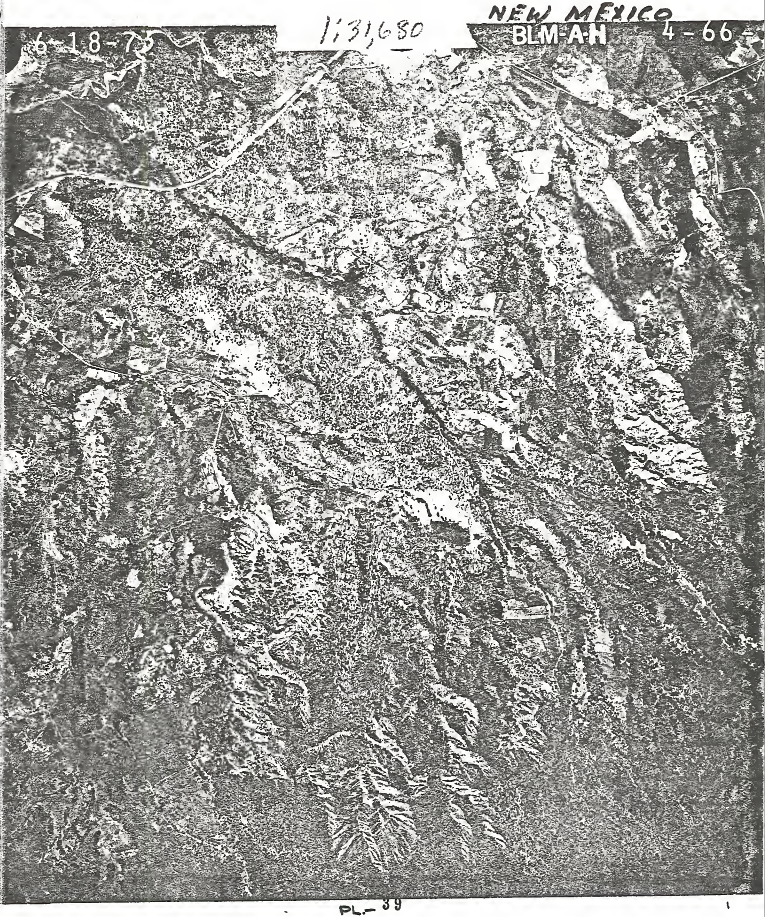
planning unit boundary		—
Aerial photos		—
photo date	example,	6/18/73
Photo scale	"	½" = 1 mile
photo index code	"	BLM-A-H (N.M.)
photo number	"	4-66-5

Code Sheet #: 0171-0024

Code Sheet #: 0171-0024

1:31,680

NEW MEXICO



PL-39

IX. PLANNING INPUTS - DESCRIPTIONS AND SAMPLES

Prog. Area: P&EC
Prep. By: DHS
Date: 7/28/77
Code Sheet# 0171-0001

DATA SOURCE DESCRIPTION
(INITIAL DATA BASE GENERATION)

TITLE OF SOURCE: Planning Units, Resource Area, and District Boundaries.

FORM: Map (BLM Planning Unit Map).

DESCRIPTION: BLM Map with Planning Units, Resource Areas, and Districts Outlined.

CUSTODIAN: AGENCY: BLM PERSON: PHONE:

LOCATION: BLM, D.O.s, SOs, DSC, Wash.

DATA FORMAT: Planning Unit boundaries are delineated on A 40" X 40" Map of the 13 contiguous Western States. State, District, and Planning Unit boundaries are delineated. Each P.U. is identified by a 4 digit number which denotes district and P.U. within that District, EX. 03-12 is Lone Cone P.U. w/i Colo's Montrose Dist. A sample P.U. Map is attached.

OVERALL DATA VALIDITY: To aid in coordination between P.U.'s, Base Map Data should be shown for a fringe of at least one or more miles beyond the unit boundaries, or to the closest natural boundary outside the unit. (An updated P.U. Map for Alaska is being prepared.)

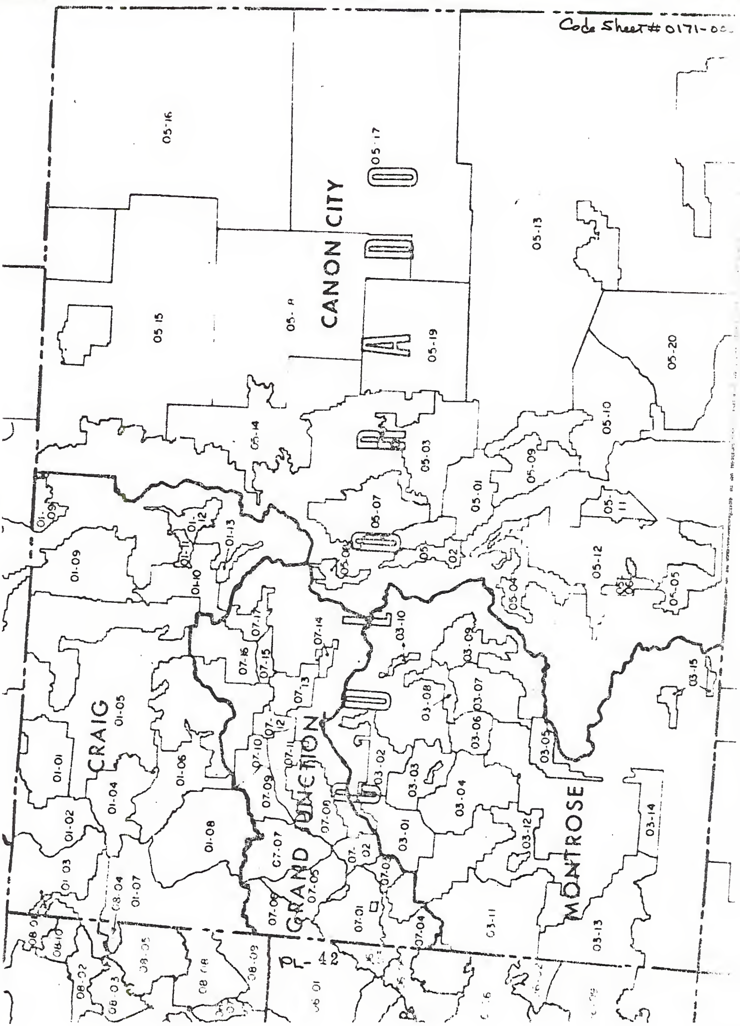
OVERALL DATA CURRENCY: Feb. 1977.

ACCESS/SECURITY LIMITATIONS: None.

ESTIMATED VOLUME: There are approx. 600 plan. units w/i the BPS. A Base Map is prepared for each p.u.. Updated Base Maps utilizing P.U. Boundaries are required on the average of every five years or 120 base maps per year. Once delineated however, P.U. boundaries seldom change.

REMARKS: None.

Code Sheet #0171-00



Prog. Area: Planning & E.C.
Prep. By: DS & BD
Date: 1 Aug. 77

Code Sheet #0171-0002

DATA SOURCE DESCRIPTION
(DATA BASE MAINTENANCE)

TITLE/DESIGNATION: Planning Units, Resource Areas, and District Boundaries

FORM: Map (BLM Planning Unit Map)

DESCRIPTION: BLM Map with Planning Units, Resource Areas, and Districts outlined.

PREPARATION RESPONSIBILITY: BLM

FORMAT:

See attached sample

DATA ENTRY PROCEDURE:

Digitization

FREQUENCY OF UPDATE: As needed (Appr. 5 per year)

VOLUME OF UPDATE: One (1)

ARCHIVING REQUIREMENTS: None

ACCESS LIMITATIONS: None

SPECIAL EDIT/AUDIT/VALIDATION REQUIREMENTS: Valid as per BLM Map

REMARKS:

None

Prog. Area: P&EC
Prep. By: DHS & BD
Date: 7/27/77
Code sheet#: 0171-0003

DATA SOURCE DESCRIPTION
(INITIAL DATA BASE GENERATION)

Page 1 of 2

TITLE OF SOURCE: USGS Quads (7.5 minute series where available)

FORM: Map (topographic)

DESCRIPTION: USGS Quads will serve as the primary data source for showing major physical features and transportation systems on the Planning Unit Base Map.

CUSTODIAN: AGENCY: PERSON: PHONE:

BLM
(Map Quads originally produced by USGS)

LOCATION:

BLM DO's, SO's, DSC

DATA FORMAT: Data is shown on a standard-size multi-color USGS MAP. Sample of a portion of a typical USGS Quad Map at 7.5 minute series (Scale 1" = 2,000 ft.) is attached.

OVERALL DATA VALIDITY: The following major physical features should typically be shown: lakes, rivers, streams, Mtn. peaks, Valleys, Historical Landmarks, Cities, Towns. Transportation systems info. includes: Highways, Roads, Railroads, Waterways. (Contours and minor physical features will be shown on overlays, not the Base Map).

OVERALL DATA CURRENCY: Map Data is latest available from USGS

ACCESS/SECURITY LIMITATIONS: None

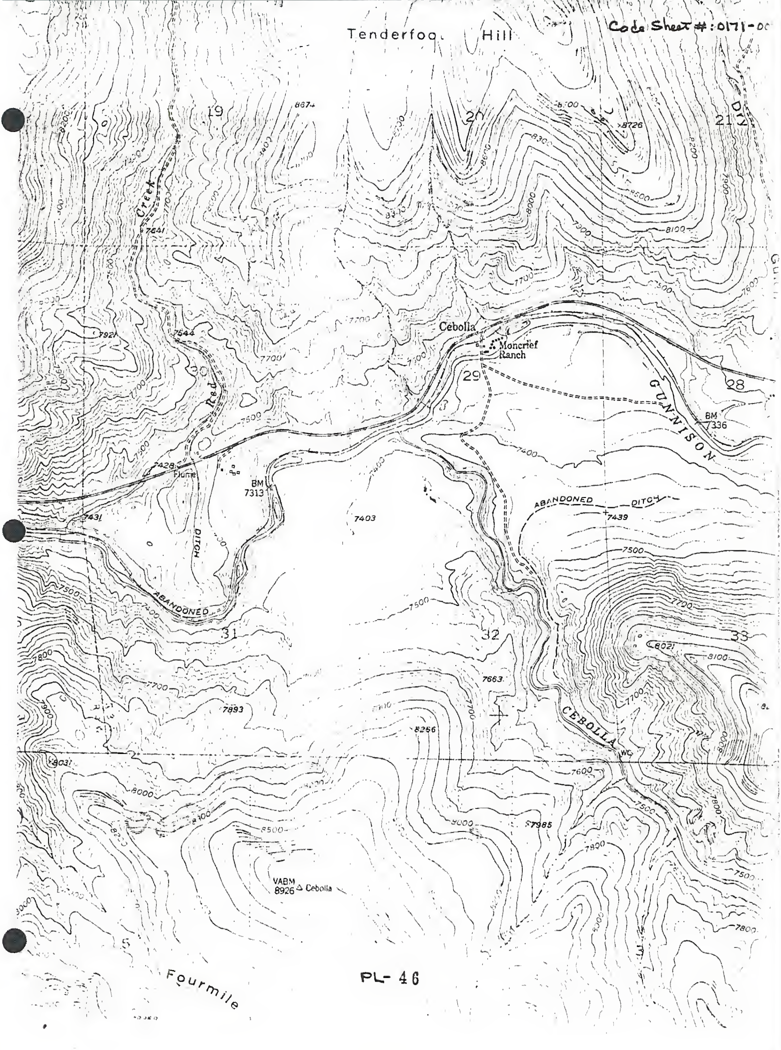
Code Sheet #: 0171-0003

DATA SOURCE DESCRIPTION
(INITIAL DATA BASE GENERATION)
Page 2 of 2

ESTIMATED VOLUME: As of 11/76 the number of published maps available from USGS for the Eleven Contiguous Western States (Except Washington State but including Alaska) amounted to 16,030 maps (7 1/2 and 15 minute series). Approximate average number of maps per state is therefore 1,500. Since 7 1/2 min. scale is 1" = 2000 ft., and common BLM base map scale is 1/2" = 1 mile (1" = 2 miles), approx. 5 USGS maps are needed to encompass an average planning unit area.

REMARKS: The volume of USGS maps involved may prohibit effective ADP; Manual evaluation may have to be heavily relined on before data is entered or in conjunction with ADP output.

Code Sheet #: 0171-00



PL- 46

TOPOGRAPHIC MAP SYMBOLS

VARIATIONS WILL BE FOUND ON OLDER MAPS

Code Sheet# 0171-0003

Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Unimproved road
Road under construction, alinement known
Proposed road
Dual highway, dividing strip 25 feet or less
Dual highway, dividing strip exceeding 25 feet
Trail

Railroad: single track and multiple track
Railroads in juxtaposition
Narrow gage: single track and multiple track
Railroad in street and carline
Bridge: road and railroad
Drawbridge: road and railroad
Footbridge
Tunnel: road and railroad
Overpass and underpass
Small masonry or concrete dam
Dam with lock
Dam with road
Canal with lock

Buildings (dwelling, place of employment, etc.)
School, church, and cemetery ... Cem
Buildings (barn, warehouse, etc.)
Power transmission line with located metal tower
Telephone line, pipeline, etc. (labeled as to type)
Wells other than water (labeled as to type) ... o Oil ... o Gas
Tanks: oil, water, etc. (labeled only if water) ... ● ● ● Water
Located or landmark object; windmill
Open pit, mine, or quarry; prospect ... ✕ ... x
Shaft and tunnel entrance ... Y

Horizontal and vertical control station:
Tablet, spirit level elevation ... BM△5653
Other recoverable mark, spirit level elevation ... △5455
Horizontal control station: tablet, vertical angle elevation ... VABM△95/9
Any recoverable mark, vertical angle or checked elevation ... △3775
Vertical control station: tablet, spirit level elevation ... BM×957
Other recoverable mark, spirit level elevation ... ×954
Spot elevation ... ×7369

Boundaries: National
State
County, parish, municipio
Civil township, precinct, town, barrio
Incorporated city, village, town, hamlet
Reservation, National or State
Small park, cemetery, airport, etc.
Land grant
Township or range line, United States land survey
Township or range line, approximate location
Section line, United States land survey
Section line, approximate location
Township line, not United States land survey
Section line, not United States land survey
Found corner: section and closing
Boundary monument: land grant and other
Fence or field line

Index contour
Intermediate contour
Supplementary contour
Depression contours
Fill
Cut
Levee
Levee with road
Mine dump
Wash
Tailings
Tailings pond
Shifting sand or dunes
Intricate surface
Sand area
Gravel beach

Perennial streams
Intermittent streams
Elevated aqueduct
Aqueduct tunnel
Water well and spring
Glacier
Small rapids
Small falls
Large rapids
Large falls
Intermittent lake
Dry lake bed
Foreshore flat
Rock or coral reef
Sounding, depth curve
Piling or dolphin
Exposed wreck
Sunken wreck
Rock, bare or awash; dangerous to navigation

Marsh (swamp)
Submerged marsh
Wooded marsh
Mangrove
Woods or brushwood
Orchard
Vineyard
Scrub

PL-47

MILE SCALE 1:62 500

Code Sheet # 0171-0003

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

TOPOGRAPHIC
MAP INFORMATION AND SYMBOLS
SEPTEMBER 1972

QUADRANGLE MAPS AND SERIES

Quadrangle maps cover four-sided areas bounded by parallels of latitude and meridians of longitude. Quadrangle size is given in minutes or degrees. The usual dimensions of quadrangles are: 7.5 by 7.5 minutes, 15 by 15 minutes, and 1 degree by 2 or 3 degrees.

Map series are groups of maps that conform to established specifications for size, scale, content, and other elements.

MAP SCALE DEPENDS ON QUADRANGLE SIZE

Map scale is the relationship between distance on a map and the corresponding distance on the ground.

Map scale is expressed as a numerical ratio or shown graphically by bar scales marked in feet, miles, and kilometers.

NATIONAL TOPOGRAPHIC MAPS

Series	Scale	1 inch represents	Standard quadrangle size (latitude-longitude)	Quadrangle area (square miles)	Price
7½-minute	1:24,000	2,000 feet	7½×7½ min.	49 to 70	$0.75
Puerto Rico 7½-minute	1:20,000	about 1,667 feet	7½×7½ min.	71	.75
15-minute	1:62,500	nearly 1 mile	15×15 min.	197 to 282	.75
Alaska 1:63,360	1:63,360	1 mile	15×20 to 36 min.	207 to 281	.75
U. S. 1:250,000	1:250,000	nearly 4 miles	1° × 2° or 3°	4,580 to 8,669	1.00
U. S. 1:1,000,000	1:1,000,000	nearly 16 miles	4° × 6°	73,734 to 102,759	1.00
Antarctica 1:250,000	1:250,000	nearly 1 miles	1° × 3° to 15°	4,089 to 8,336	.75
Antarctica 1:500,000	1:500,000	nearly 8 miles	2° × 7½°	28,174 to 30,462	.75

CONTOUR LINES SHOW LAND SHAPES AND ELEVATION

The shape of the land, portrayed by contours, is the distinctive characteristic of topographic maps.

Contours are imaginary lines following the ground surface at a constant elevation above or below sea level.

Contour interval is the elevation difference represented by adjacent contour lines on maps.

Contour intervals depend on ground slope and map scale; they vary from 5 to 1,000 feet. Small contour intervals are used for flat areas; larger intervals are used for mountainous terrain.

Supplementary dotted contours, at less than the regular interval, are used in selected flat areas.

Index contours are heavier than others and most have elevation figures.

Relief shading, an overprint giving a three-dimensional impression, is used on selected maps.

Orthophotomaps, which depict terrain and other map features by color-enhanced photographic images, are available for selected areas.

COLORS DISTINGUISH KINDS OF MAP FEATURES

Black is used for manmade or cultural features, such as roads, buildings, names, and boundaries.

Blue is used for water or hydrographic features, such as lakes, rivers, canals, glaciers, and swamps.

Brown is used for relief or hypsographic features—land shapes portrayed by contour lines.

Green is used for woodland cover, with patterns to show scrub, vineyards, or orchards.

Red emphasizes important roads and is used to show public land subdivision lines, land grants, and fence and field lines.

Red tint indicates urban areas, in which only landmark buildings are shown.

Purple is used to show office revision from aerial photographs. The changes are not field checked.

INDEXES SHOW PUBLISHED TOPOGRAPHIC MAPS

Indexes for each State, Puerto Rico and the Virgin Islands of the United States, Guam, American Samoa, and Antarctica show available published maps. Index maps show quadrangle location, name, and survey date. Listed also are special maps and sheets, with prices, map dealers, Federal distribution centers, and map reference libraries, and instructions for ordering maps. Indexes and a booklet describing topographic maps are available free on request.

HOW MAPS CAN BE OBTAINED

Mail orders for maps of areas east of the Mississippi River, including Puerto Rico, the Virgin Islands of the United States, and Antarctica should be ordered from the U. S. Geological Survey Distribution Section, 1200 South Eads Street, Arlington, Virginia 22202. Maps of areas west of the Mississippi River, including Alaska, Hawaii, Louisiana, Minnesota, American Samoa, and Guam should be ordered from the Distribution Section, Federal Center, Denver, Colorado 80225. A single order combining both eastern and western maps may be placed with either office. Residents of Alaska may order Alaska maps or an index for Alaska from the Distribution Section, 310 First Avenue, Fairbanks, Alaska 99701. Order by map name, State, and series. Maps without woodland overprint are available on request. On an order amounting to $300 or more at the list price, a 30-percent discount is allowed. No other discount is applicable. Prepayment is required and must accompany each order. Payment may be made by money order or check payable to the U. S. Geological Survey, or cash (the exact amount) at sender's risk. Your ZIP code is required.

Sales counters are maintained in the following U. S. Geological Survey offices, where maps of the area may be purchased in person: 1200 South Eads Street, Arlington, Va.; Room 1028, General Services Administration Building, 18th & F Streets N.W., Washington, D. C.; 1109 North Highland Street, Arlington, Va.; 900 Pine Street, Rolla, Mo.; 345 Middlefield Road, Menlo Park, Calif.; 7638 Federal Building, 300 North Los Angeles Street, Los Angeles, Calif.; 504 Custom House, 555 Battery Street, San Francisco, Calif.; Building 41, Federal Center, Denver, Colo.; 1012 Federal Building, 1961 Stout Street, Denver, Colo., Room 1-C 45, 1100 Commerce Street, Dallas, Texas; 8102 Federal Building, 125 South State Street, Salt Lake City, Utah; 678 U. S. Court House, West 920 Riverside Avenue, Spokane, Wash.; 108 Skyline Building, 508 Second Avenue, Anchorage, Alaska; 441 Federal Building, 709 West Ninth Street, Juneau, Alaska; and 310 First Avenue, Fairbanks, Alaska.

Commercial dealers sell U. S. Geological Survey maps at their own prices. Names and addresses of dealers are listed in each State index.

PL- 48

MILE SCALE 1:24 000

FOOT SCALE 1:24 000

FOOT SCALE 1:62 500

Prog. Area: Planning & E.C.
Prep. By: DS & BD
Date: 1 Aug 77
Code Sheet#: 0171-0004

DATA SOURCE DESCRIPTION
(DATA BASE MAINTENANCE)

TITLE/DESIGNATION: USGS Quads (7.5 minute Series where available)

FORM: Map (Topographic)

DESCRIPTION: USGS Quads are primary data source for major physical features and transportation systems on the Plan. Unit Base Map.

PREPARATION RESPONSIBILITY: BLM

FORMAT: See attached sample

DATA ENTRY PROCEDURE: Digitization

FREQUENCY OF UPDATE: As needed (Appr. 5 per year)

VOLUME OF UPDATE: One (1)

ARCHIVING REQUIREMENTS: None

ACCESS LIMITATIONS: None

SPECIAL EDIT/AUDIT/VALIDATION REQUIREMENTS: Valid as per BLM Map

REMARKS:
None

Prog. Area: Plan. & E.C.
Prep. By: DHS/BAD
Date: 8/2/77
Code Sheet#: 0171-0005

DATA SOURCE DESCRIPTION
(INITIAL DATA BASE GENERATION)

TITLE OF SOURCE: Physical Access and Transportation Rights-of-Way (ATROW).

FORM: Maps

DESCRIPTION: Physical access and transportation routes on or to public lands.

CUSTODIAN: AGENCY: BLM PERSON: PHONE:

LOCATION: District Offices.

DATA FORMAT: Sample example attached. Physical access is defined as a usable road or trail in which there is no legal authority for use of the right-of-way by either the public generally or BLM personnel for administrative purposes. Transportation or access routes are broken down by County roads, BLM roads, priva and other roads, trails, and other means of access i.e. air, rail, water, etc. Surface condition of access routes are described.

OVERALL DATA VALIDITY:

ATROW data is delineated by Resource Areas and shown on County maps at a scale of 1/2" = 1 mile and BLM maps at a scale of 2" = 1 mile.

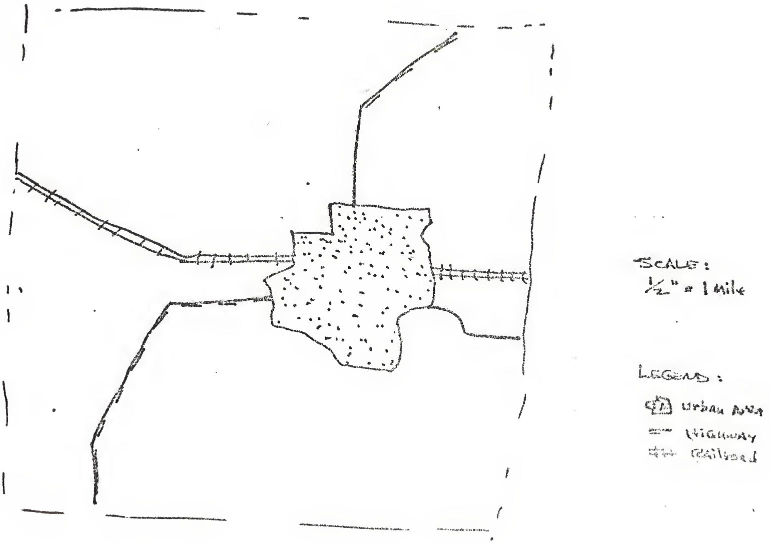
OVERALL DATA CURRENCY: Data currency varies among District Offices.

ACCESS/SECURITY LIMITATIONS: None.

ESTIMATED VOLUME: 250 (Approx.) Resource Areas X 1/5 Average Annual Update = 50 Average Annual Update.

REMARKS: N/A

PHYSICAL ACCESS AND TRANSPORTATION RIGHTS-OF-WAY (ATROW) — COUNTY MAP



PL-51

Code Sheet#: 0171-0005

Prog. Area: Plan. & E.
Prep. By: DHS/BAD
Date: 8/5/77
Code sheet #: 0171-0006

DATA SOURCE DESCRIPTION
(DATA BASE MAINTENANCE)

TITLE/DESIGNATION: → Physical Access and Transportation Rights-of-Way (ATROW)
FORM: Maps - - - - - - → (Updated Resource Area ATROW Maps by D.O. Staff)

DESCRIPTION: Physical Access and Transportation Routes on or to Public Lands.

PREPARATION RESPONSIBILITY: District Offices (BLM).

FORMAT:
Example attached.

DATA ENTRY PROCEDURE: Digitization.

FREQUENCY OF UPDATE: Average of once every five years.

VOLUME OF UPDATE: 250 (approx.) Resource Areas X 1/5 Average Annual Update = 50 Average Annual Volume.

ARCHIVING REQUIREMENTS: As data is changed.

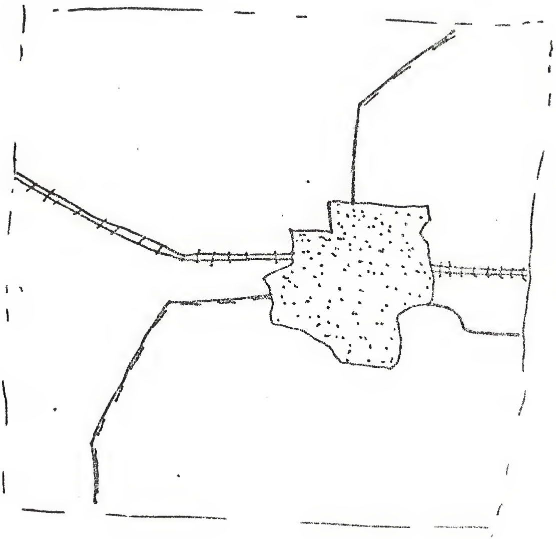
ACCESS LIMITATIONS:
D.O. Lands Staff familiar with ATROW data in District.

SPECIAL EDIT/AUDIT/VALIDATION REQUIREMENTS: Where it is not clear whether a road or trail furnishes public access to the Public Lands, BLM Service Center ATROW Staff should be consulted.

REMARKS:
N/A

PHYSICAL ACCESS AND TRANSPORTATION RIGHTS-OF-WAY (ATROW) — COUNTY MAP

PL-53



SCALE:
½" = 1 Mile

LEGEND:

▨ Urban Area
— Highway
╪ Railroad

Code Sheet #:
0171-0006

Prog. Area: Plan.&Env.Coor.
Prep. By: DHS&BAD
Date: 8/8/77

Code Sheet#: 0171-0007

DATA SOURCE DESCRIPTION
(INITIAL DATA BASE GENERATION)

TITLE OF SOURCE: Aerial Photo Coverage

FORM: Aerial Photographs

DESCRIPTION: A photograph taken from the air of the public lands and resources administered by BLM.

CUSTODIAN: AGENCY: BLM
PERSON: Dick Wiltsie
PHONE: 234-2167

LOCATION: Aerial photo negatives are stored either in DSC Office of Special Mapping or at the EROS Data Center in Sioux Falls.
Contact prints (aerial photos) are stored in District and State Offices.

DATA FORMAT: Sample color photo is attached. Photo size is 9" x 9", (actual photo coverage). Photo type is black & white, color infra-red, and/or total color. Some photo sites are covered by more than one photo type. All public lands administered by BLM are covered by aerial photographs.

OVERALL DATA VALIDITY:
The scale of aerial resource photography is dependent upon flight heights above ground and camera focal length. BLM photo scales range from 1/2" = 1 mile to 4" = 1 mile, with the typical scale being 2" = 1 mile.

OVERALL DATA CURRENCY: BLM aerial photos presently have a ten-year currency i.e. photos taken during 1966 - 1976 are considered current. (1956 - '66 are marginal, and 1952 - '56 are obsolete). Plans are being made to convert BLM's photo library to a cyclical five-year currency in the near future. Approximately half of BLM's photo library contains photos taken during the last seven years, i.e. since 1970. Therefore, more than half of the photo library is current.

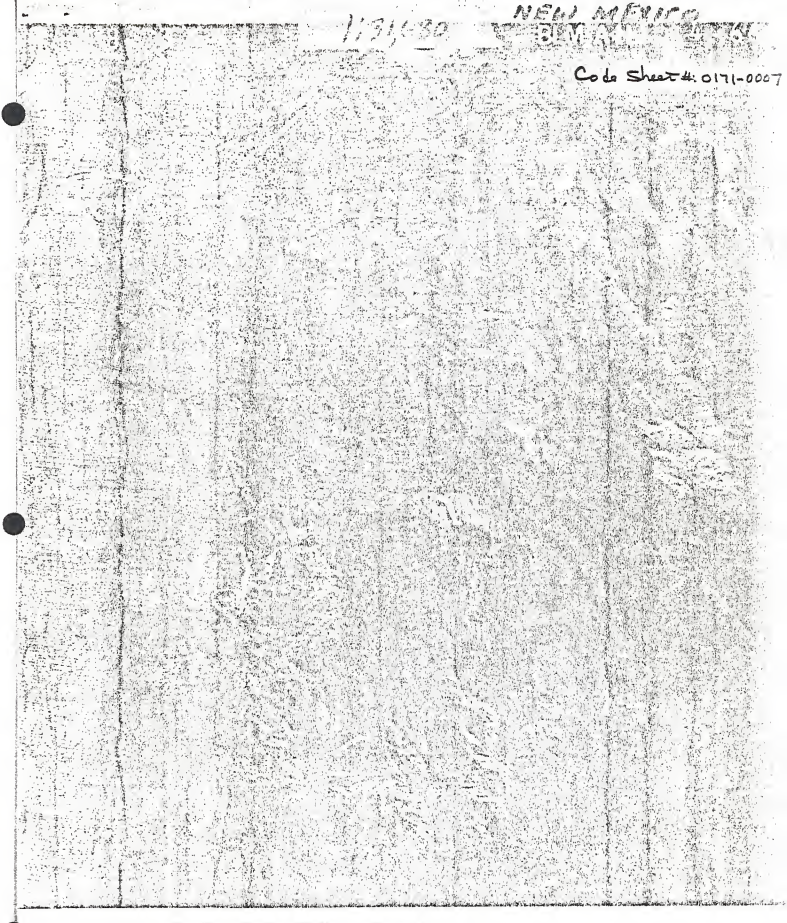
ACCESS/SECURITY LIMITATIONS: None

ESTIMATED VOLUME: Lands and resources administered by BLM are covered by 712,000 aerial photos, which include all surface acreage and some subsurface acreage. Surface acreage coverage includes 467,000 aerial photos. The remaining photos (245,000) include subsurface, some duplicate surface site photos, and U.S. Forest Service - BLM administered fringe areas.

REMARKS: N/A

1/31/80 NEW MEXICO

Code Sheet #: 0171-0007



PL-55

Prog. Area: Plan.&Env.Coo
Prep. By: DS&BAD
Date: 8/8/77
Code Sheet#: 0171-0008

DATA SOURCE DESCRIPTION
(DATA BASE MAINTENANCE)

TITLE/DESIGNATION: Aerial Photo Coverage

FORM: Aerial Photographs

DESCRIPTION: A photograph taken from the air of the public lands and resources administered by BLM.

PREPARATION RESPONSIBILITY: BLM-Office of Special Mapping, DSC. (Also, EROS Data Center, Sioux Falls)

FORMAT:

See attached sample. Photo size is 9" x 9" displayed in either black & white, color infra-red, or total color.

DATA ENTRY PROCEDURE:

Updated aerial photos by Office of Special Mapping.

FREQUENCY OF UPDATE: Complete update of aerial photo library currently on ten-year cycle, soon to be on five-year cycle.

VOLUME OF UPDATE: 71,200 photos per year on ten-year cycle
(142,400 photos per year on five-year cycle)

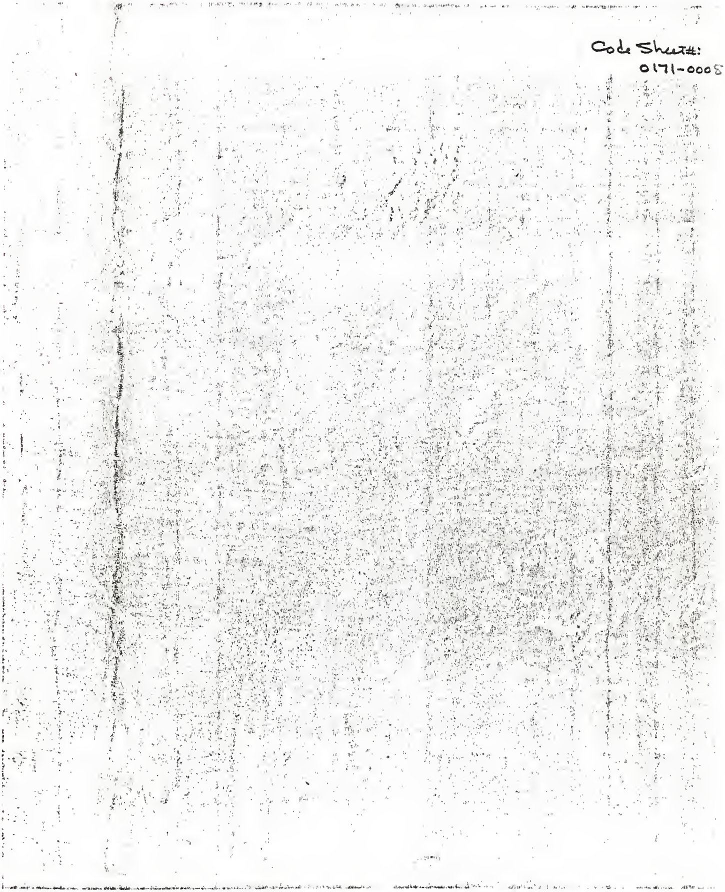
ARCHIVING REQUIREMENTS: Obsolete photos replaced with current photos.

ACCESS LIMITATIONS: None•Photos accessible to D.O., S.O., DSC Personnel.

SPECIAL EDIT/AUDIT/VALIDATION REQUIREMENTS: Indicate extent, date, scale, and index code of existing photos on overlay. Mark alternate photo centers on overlay by a dot and photo number.

REMARKS:
N/A

Code Sheet#:
0171-0008



X. CODE SHEET SUMMARY OF DRD USER REQUIREMENTS SPECIFICATIONS

CODE SHEET SUMMARY OF DRD USER REQUIREMENT SPECIFICATIONS

The following is a summary of a survey, by the DRD Planning (URA) team, of all DRD resource groups adherence to Phase DRD-URA Step 2, 3, and 4 requirements. The specific identifying alphanumberic code, associated with each resource program area, is listed by Resource Area below.

Lands:

URA Step 2 (Physical Profile)

Output# 2260
Output# 2150
Output# 2190

URA Step-3 (Existing Situation)

Output# 2130
Output# 2140
Output# 2150
Output# 2160
Output# 2165
Output# 2167
Output# 2170
Output# 2090
Output# 2100
Output# 2105
Output# 2110
Output# 2180
Output# 2200
Output# 2190
Output# 2210
Output# 2230
Output# 2250
Output# 2260
Output# 2262
Output# 2270

URA Step 4 (Management Opportunities)

Output# 2290
Output# 2280
Output# 2310
Output# 2300
Output# 2330
Output# 2320
Output# 2350
Output# 2340
Output# 2360
Output# 2370
Output# 2380
Output# 2390
Output# 2410
Output# 2420

Minerals:

URA Step 2 (Physical Profile)

Output# U2-1
Output# U2-2
Output# VO-19

URA Step 3 (Existing Situation)

Output# U3-1
Output# RI-3
Output# U3-9
Output# U4-2
Output# U4-4
Output# U4-1
Output# U3-7
Output# U3-2
Output# U3-10
Output# U4-7

URA Step 4 (Management Opportunities)

Output# U4-1
Output# U4-2
Output# U4-4

Forestry:

URA Step 2 (Physical Profile)

Output# F0-17

URA Step 3 (Existing Situation)

Output# F0-16
Output# F0-17
Output# F0-18
Output# F0-22
Output# F0-23
Output# F0-25
Output# F0-24
Output# F0-27
Output# F0-28
Output# F0-29
Output# F0-26

URA Step 4 (Management Opportunities)

Output# F0-12
Output# F0-10
Output# F0-11
Output# F0-9
Output# F0-14
Output# F0-30
Output# F0-15

Range:

URA Step 2 (Physical Profile)

Output# V0-1
Output# V0-14
Output# 3446
Output# 3444
Output# 3510
Output# 3670
Output# 3672
Output# 3674
Output# 3676

Output#	3678
Output#	3680

URA Step 4 (Management Opportunities)

Output#	3690
Output#	3692
Output#	3694
Output#	3696
Output#	3698
Output#	3700
Output#	3702

Watershed:

URA Step 2 (Physical Profile)

Output#	A0-20
Output#	A0-25
Output#	A0-21
Output#	A0-22
Output#	A0-23
Output#	G0-22
Output#	Go-23
Output#	G0-1
Output#	S0-2
Output#	V0-14
Output#	W0-39
Output#	W0-40
Output#	W0-43
Output#	W0-44
Output#	W0-45
Output#	W0-46
Output#	W0-47
Output#	W0-48
Output#	W0-49
Output#	W0-41
Output#	W0-42
Output#	V0-7
Output#	V0-16
Output#	S0-17
Output#	So-18
Output#	G0-7
Output#	V0-18
Output#	V0-19

URA Step 3 (Existing Situation)

Output#	VO-1
Output#	VO-13
Output#	VO-21
Output#	VO22
Output#	WO-52
Output#	WO-54
Output#	WO-56
Output#	WO-57
Output#	VO-9
Output#	WO-59
Output#	WO-45
Output#	WO-48

URA Step 4 (Management Opportunities)

Output#	VO-24
Output#	VO-25

Wildlife:

URA Step 2 (Physical Profile)

Output#	U
Output#	V
Output#	W
Output#	W1
Output#	P
Output#	Q
Output#	B
Output#	C

URA Step 3 (Existing Situation)

Output#	I
Output#	J
Output#	K
Output#	L
Output#	Q
Output#	E
Output#	B
Output#	P
Output#	A
Output#	Z
Output#	Y1

URA Step 4 (Management Opportunities)

Output#	J1
Output#	J3
Output#	J5

Recreation:

URA Step 2 (Physical Profile)

Output#	0454
Output#	0451

URA Step 3 (Existing Situation)

Output#	0651
Output#	0552
Output#	0151
Output#	0153
Output#	0153
Output#	0562
Output#	0563
Output#	0564
Output#	0561
Output#	0553
Output#	0653

URA Step 4 (Management Opportunities)

Output#	0154	
Output#	0654	
Output#	WO-30	(Watershed for Recreation)
Output#	0155	
Output#	0653	

Land Records and Survey

URA Step 2 (Physical Profile)

Output#	C509

URA Step 2 (Physical Profile) (cont.)

Output#	C502
Output#	C503
Output#	C504

Planning (URA):

URA Step 1 (Physical Profile)

Output#	0171-0020

URA Step 2 (Existing Situation)

Output#	0171-0021
Output#	0171-0022
Output#	0171-0023
Output#	0171-0024

Fire:

URA Step 2 (Physical Profile)

Output#	1·2·2·1
Output#	1·2·2·2

Bureau of Land Management
Library
Bldg. 50. Denver Federal Center
Denver, CO 80225